REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-25 remain in the application.

In the section entitled "Claim Rejections - 35 USC § 103" on pages 2-6 of the above-mentioned Office action, claims 1-8, 10, and 12-25 have been rejected as being unpatentable over Ota et al. (US 6,335,218 B1) in view of Chang et al. (US 5,438,006) and further in view of Shibata et al. (US 6,008,539) under 35 U.S.C. § 103(a).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, inter alia:

> providing a semiconductor body containing a substrate and at least one nitride compound semiconductor disposed on the substrate;
>
> applying a metal layer to a surface of the semiconductor body; and

dry-chemically removing a part of the metal layer and a part of the semiconductor body previously covered by the removed metal layer.

The invention of the instant application relates to a method for fabricating a semiconductor component including at least one nitride compound semiconductor, in which a semiconductor body containing at least one nitride compound semiconductor is disposed on a substrate, a metal layer is applied to a surface of the semiconductor body, and subsequently a part of the metal layer and a part of the semiconductor body previously covered by the removed metal are layer dry-chemically removed.

Ota et al. describe a method for fabricating a nitride-based semiconductor component, in which according to Figs. 4 and 5 as well as the description in column 7, lines 47-62, a nickel layer is initially applied on the semiconductor body, which is subsequently wet-chemically etched. The residual part of the nickel layer serves as a mask for a subsequent dry etching step, in which a part of the semiconductor body is removed.

In contrast to claim 1 of the instant application, Ota et al. do not describe dry-chemically removing a metal layer, but rather explicitly disclose wet-chemically etching a metal layer, such as a nickel layer (see column 7, line 52).

Chang et al. describe a method for fabricating an integrated circuit. The structure and composition of such a silicon-based integrated circuit differ fundamentally from a nitride-based component to which claim 1 of the instant application relates. Especially, the fabrication processes and the chemicals used are entirely different so that the teachings of Ota et al. and Chang et al. cannot be combined even due to this reason alone.

Further, contrary to the opinion of the Examiner, Chang et al. also do not teach dry-chemically removing a metal layer from the semiconductor body. It is noted that the Examiner has cited column 2, lines 57-60 of Chang et al. as disclosing dry etching. However, the text in column 2, lines 57-60 of Chang et al. describes the removal of an oxide mask, which is applied on the metal layer, with a known technology such as dry etching or wet etching. This step does not relate to the removal of the metal layer lying therunder. Rather, it is disclosed in column 2, line 48 of Chang et al. that the metal layer that is not covered by the oxide mask is etched away, the etching method for which is not disclosed.

Furthermore, the metal layer of Chang et al. is formed of titan nitride or tungsten silicide. The composition and thus the etchability as well as the etchant to be used of these

layers are not comparable with a nickel layer as described in Ota et al. Especially, neither Chang et al. nor Ota et al. teach or suggest a dry-chemical removal of a metal layer on a nitride compound semiconductor.

Similar to Ota et al., Shibata et al. disclose a nitride compound semiconductor, on which a metal layer, such as a titan or nickel layer (see column 4, lines 21-23), is applied. This layer is subsequently partially removed by a wet-chemical process (see column 4, line 28 ("etching liquid") or column 4, line 34 ("... use of an acid etchant")). Therefore, Shibata et al., similar to Ota et al., teach the application of a wet-chemical etchant for removing a metal layer on a nitride compound semiconductor body. Neither Shibata et al. nor Ota et al. suggest other etching processes for this purpose.

Clearly, none of the cited references discloses a method for fabricating a semiconductor component with at least a nitride compound semiconductor in which a metal layer is applied on the surface of the semiconductor body and subsequently partially dry-chemically removed, as recited in claim 1 of the instant application. Rather, the prior art only teaches a wet-chemical removal of a corresponding metal layer. Also, a person skilled in the art would not obtain any hint from the cited references to choose a different removal process.

The dry-chemical removal of the metal layer has the advantage that the metal layer and the semiconductor body lying therebeneath can be handled with a similar generic etching process, thus advantageously reducing the fabrication cost. Further, steep ridge structures can be advantageously produced with a dry-chemical etching process (see page 6, lines 13-20 of the specification).

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Claim 1 is, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1, they are believed to be patentable as well.

Applicants acknowledge the Examiner's statement in the section entitled "Allowable Subject Matter" on page 6 of the above-mentioned Office action that claims 9 and 11 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Since claim 1 is believed to be patentable as discussed above and claims 9 and 11 are ultimately dependent on claim 1, they

are believed to be patentable in dependent form. A rewrite is therefore believed to be unnecessary at this time.

In view of the foregoing, reconsideration and allowance of claims 1-25 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made. Please charge any fees which might be due with respect to 37 CFR Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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July 19, 2005

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